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Knowledge Regarding Breast Cancer and Breast Self Examination

Charnjit Kaur[1], Dr. Jogindra Vati[2]
[1]Associate Professor, Institute of Nursing, University Regional Centre, BFUHS, Sri Goindwal Sahib, Tarn Taran, Punjab
[2]Professor, SGHS College of Nursing, Mohali
Email address: Charanjit2oct@gmail.com

***Abstract*— *Cancer is the 2nd leading cause of deaths globally and approximate 9.6 million deaths occurs due to cancer in year 2018. However, cancer of lungs, female breast and colorectal are the foremost cancers among all types of cancers. Cancer has negative impact on patient as well as on family. Early detection, treatment and modification of risk factors can prevent the occurrence of cancer. Aim: The aim of the study is to assess knowledge regarding breast cancer and breast self examination among women residing in rural area of district Tarn Taran. Methods: Quantitative(descriptive) Research approach with cross-sectional survey design was used to assess knowledge regarding breast cancer and breast self examination in 500 conveniently selected females who were residing in rural area of district tarn Taran. Knowledge was assessed by using self structured socio-demographic sheet and knowledge questionnaire in breast cancer and breast self examination. Results: Mean age of subjects was 32.8 years. Majority ((95.68%) had history of cancer in the family. Two third(67.6%) subjects had average, 16.4% were Good knowledge only 16% were having below knowledge regarding breast cancer and breast self examination. Conclusion: the study conclude that despite family history of cancer, study subjects had average knowledge regarding breast cancer and breast self examination. Appropriate teaching strategies need to be used to increase awareness regarding breast cancer and breast self examination.*

Keywords*— *Knowledge, breast cancer, breast self examination.

I. INTRODUCTION

According to WHO, the global cancer burden is estimated to have risen to 18.1 million new cases and 9.6 million deaths in 2018. One in 5 men and one in 6 women worldwide develop cancer during their lifetime, and one in 8 men and one in 11 women die from the disease. Worldwide, the total number of people who are alive within 5 years of a cancer diagnosis, called the 5-year prevalence, is estimated to be 43.8 million. Furthermore, breast cancer is a leading cause of cancer death in women (15.0%), followed by lung cancer (13.8%) and colorectal cancer (9.5%).[1]

Breast cancer incidence rate is rapidly increasing, especially in the developing countries[2,3]. Breast cancer originates from breast tissues, most commonly in the inner lining of milk ducts (ductal carcinoma) or the lobules (lobular carcinoma).[4]The prognosis and survival rates for breast cancer depend on the cancer type, stage, treatment of cancer and geographical location of the patient[8]. Genetic mutation and damage to the DNA that can lead to breast cancer, have been experimentally linked with oestrogen exposure. Some individuals inherit defects in the DNA and genes like the P53, BRCA1 and BRCA2.[5]

Other possible risk factors of breast cancer may be genetics, lack of childbearing or lack of breast feeding, increased level of some hormones[6]. obesity, exposure to light pollution, tobacco, intake of high fat diet, alcohol intake[7,8,9]and higher cholesterol level.[10] Many chemicals such as polychlorinated biphenyls, polycyclic aromatic hydrocarbons, organic solvents, [11] and number of pesticides also increase this risk.[12] According to Harvie M, the risk in premenopausal women is higher with increased central obesity (higher waist-hip ratio or WHR). The study showed 24% reduced breast cancer risk in women with the smallest WHR in comparison to the women with higher WHR[13].

TNM system is used for grading of breast cancer. TNM indicates the size of the tumour (T), whether the tumour has spread to the lymph nodes (N) or not in the armpits or the tumour has metastasized (M) (i.e. spread to a more distant part of the body). The main stages are: Stage 0 shows pre-cancerous or marker condition, either the ductal carcinoma in situ (DCIS) or lobular carcinoma in situ (LCIS). Stages 1-3 indicate whether within the breast or regional lymph nodes. Stage 4 shows that the cancer is metastatic and has a less favourable prognosis[14].

Breast cancer produces no symptoms when the tumour is small. When breast cancer has grown to a size that can be felt, the most common physical sign is a painless lump that feels different from the rest of breast tissue. Other signs of breast cancer besides a lump may include thickening of breast tissue, one breast becoming larger or lower, a nipple changing position or shape or becoming inverted, a rash on or around a nipple, bloody discharge from nipples, constant pain in part of the breast or armpit and small knots or nodes beneath the armpit or around the collarbone[15]

It is very important for women to detect breast cancer at an early stage by screening. A breast self examination and clinical breast examination involve feeling the breast for lumps or anything abnormal. Clinical breast examination are performed by health care providers while breast self examination is performed by women themselves. A breast self examination is an important, cheap and easy method for finding any abnormality at early stage. women of all age groups should perform BSE. The beat time of the month to perform breast self examination is after menstruation in adults, when the breast tisue is softer and lumps are more likely to be felt. For post menopausal women or those who have

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hysterectomy, a suitable time is the first day of the month or the same time very month on a regular basis. A women who regularly examines her breast will get a very clear idea of her normal breast tissue and consistency and can help her to notice if something is abnormal.[16]

Studies have shown that breast self examination helps to make an early detection of breast cancer. The current recommendations made by the American College of Obstetricians and Gynaecologist and the American Cancer Society for Breast Self Examination are to perform BSE monthly that begins at the age of 20 years and Clinical Breast Self Examination annually that begins at age of 18 years.[17]

A survey conducted to evaluate the level of knowledge of breast cancer risk factors and breast self examination practiced among 151 Jordanian women. The survey finding indicated that subject had low mean level knowledge about breast cancer risk factors. It was also concluded that 91.4% heard of Breast Self Examination, 73.5% knew the time of performing it, 71% knew the frequency 65% knew the method of Breast Self Examination and 39% Practice Breast Self Examination monthly[18]

Another study reported that 92% of the women knew BSE but only 31% practiced it thoroughly. Women living in rural communities with the life companion and younger women were more likely to practice BSE. It concluded that knowledge of BSE is widespread; it is actually practices by only one-third of women[19] Cancer has tight grip in Punjab as well, malwa region is mostly affected region. These alarming conditions in Punjab instigate the researcher to conduct this study.

II. Methods and Materials

Quantitative, descriptive cross sectional survey was used to assess knowledge regarding breast cancer and breast self examination from 500 conveniently selected females who were residing at rural area of district Tarn Taran. Following two tools was used in the study which are as follows:

Socio-demographic data sheet: It was a self structured questionnaire which was used in study to collect sociodemographic profile of study subjects. It was consist of 9 items related to socio demographic data of the subjects such as age, marital status, number of children, religion, education, occupation, income, type of family and family history related to cancer.

Knowledge Questionnaire on Breast Cancer and BSE: A structured knowledge questionnaire was developed to assess knowledge regarding breast cancer and breast self examination among women. It consists of 35 items related to knowledge regarding breast cancer and breast self examination. It consists of questions on various domains such as meaning and concept (7 items), risk factors (6 items), sign and symptoms (3 items), diagnostic tests (3 items), Breast Self Examination (9 items), prevention and management modalities (7 items) of breast cancer. The tool was converted into local language of study subjects. Each multiple choice question has 4 options; out of which one is the correct answer. For every correct answer "one" score and for every wrong answer "zero" score was given. Thus the total score for knowledge was 35, ranging between 0 -35. The interpretation of knowledge scores is as follows:

Range of scores	Percentage	Level of knowledge
0-17	Below 50%	Below average
18-26	51-75%	Average
27-35	Above 75%	Good

The reliability of the tools by 'test-retest method' was 0.86. Pilot study was conducted on fifty subjects and study was found to be feasible.

After obtaining the permission from significant authorities, data was collected from study subjects after written consent has been obtained. Appropriate descriptive and inferential statistics was used to analyze data, p value <0.05 was considered as level of significance.

III. Results

I Sociodemographic characteristics of subjects.

The mean age of the subjects is 32.8 years ± 10.67. majority of study subjects i.e. 167 (33.4%) subjects have done matriculation. majority subjects 374 (74.8%) were married. majority of women i.e. 381(76.22%) were house- wife. , more than half of subjects i.e. 269 (53.8%).(40.4%) are having monthly income between Rs. 6000-10000. majority of subjects i.e. 487 (96.8%) belong to Sikh religion. 158 (31.6%) of subjects have three or more children. majority of subjects i.e. 478 (95.68%) had history of cancer in the family.

II knowledge of women regarding breast cancer and breast self examination

TABLE 1: Frequency & percentage distribution of women according to their level of knowledge (scores) regarding breast cancer and breast self examination

N=500

Level of knowledge (Score)	**Frequency & Percentage**	
	f	**%**
Good (>17)	82	16.4
Average (9-17)	338	67.6
Below Average (0-8)	80	16.0

Table 1 depict frequency and percentage distribution of women of age group 15-60 years according to their level of knowledge regarding breast cancer and breast self examination.

The data shows that out of 500 subjects, 82 (16.4%) had good knowledge regarding breast cancer and breast self examination. 338 (67.6 %) had an average knowledge, and rest 80 (16%) had below average knowledge.

Thus, it is evident that majority of subjects had an average knowledge and only few are having good or above average knowledge.

Table 2 depicts item wise knowledge of women understudy regarding breast cancer and breast self examination. The data revealed that out of 500 subjects 28.4% subjects had knowledge about meaning of cancer and 24.2% had knowledge about meaning of Breast Cancer.

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TABLE 2: Item wise correct knowledge of women regarding Breast Cancer and Breast self examination

(N=500)

S No	Items of Breast Cancer and Breast Self Examination	Correct response of subjects	
		n	(%)
1.	Meaning of 'cancer'	142	28.4
2.	Meaning of 'Breast cancer'	141	24.2
3.	Age group at more risk for developing breast cancer	110	22.0
4.	A woman who had early menarche is more likely to develop breast cancer	177	35.4
5.	Age, gender & family history of cancer in immediate relative are the associated factors to increase risk for breast cancer	91	18.2
6.	Oral Contraceptive Pills for birth control has a risk for breast cancer	243	48.6
7.	Post menopausal women on Hormone Replacement Therapy have risk for developing breast cancer	155	36.0
8.	The physical factor that causes breast cancer among women	112	22.4
9.	The main symptom of breast cancer	70	14.0
10.	The characteristics of lump of breast cancer	66	13.2
11.	Sign and symptoms of breast cancer other than lump	228	45.6
12.	The most common site of cancer in breast	116	23.2
13.	The most significant diagnostic technique to determine breast cancer	317	63.4
14.	Most of the breast lumps can be initially/early detected by woman herself	245	49.0
15.	The BSE is the cheapest/ easy method to detect breast lump by woman	324	64.8
16.	The action a woman should do, if feels lump in her breast	300	60.0
17.	The age at which breast self examination can be started by a woman	224	44.8
18.	The most appropriate method of palpation of lumps in breast	368	73.6
19.	The most suitable time for BSE	310	62.0
20.	The method of Breast self examination	176	35.2
21.	During BSF, women must inspect for nodular formation over the armpit	229	45.8
22.	Steps of Breast Self Examination	144	28.8
23.	Observation made during Breast Self Examination	178	35.6
24.	The best time period for adolescent girls to do Breast self examination	136	27.2
25.	The best time for menopausal woman to do Breast Self Examination	116	23.2
26.	The importance of early detection of breast cancer	260	52.0
27.	The strategies maximise survival rate of breast cancer patients	165	33.0
28.	The management strategies adopted in breast cancer	182	36.4
29.	Management modality to restore feminist features after mastectomy	73	14.6
30.	The main complication of breast cancer	257	51.4
31.	The most common site for metastasis in breast cancer	212	42.4
32.	The most prominent symbol of awareness of breast cancer	96	19.2
33.	Remedies to reduce chances of developing breast cancer	123	24.6
34.	Food habits to keep a breast cancer at bay	104	20.8
35.	A new method for better prevention and early treatment of breast cancer	162	32.4

Only 22% subjects knew the age group at more risk for developing breast cancer. 18.2% subjects answered correctly about the factors associated with increased risk for breast cancer. About 49% subjects were aware of that taking Oral Contraceptive Pills for birth control has risk for breast cancer; 36% subjects had knowledge that Post menopausal women if had Hormone Replacement Therapy have a risk for developing breast cancer; whereas 22.4% answered correctly about physical factors which cause breast cancer.

Only 14% subjects knew about the main symptoms of breast cancer. 13.2% subjects were aware of the characteristics of lump of breast cancer and 23.2% aware about the common site of cancer in breast.

More than half 63.4% subjects answered correctly about the significant diagnostic test to determine breast cancer and 64.8% knew about the cheapest and easy method of detection of breast lump.

About 44.8% subjects answered correctly about the age for BSE. Sixty two percentage subjects knew the suitable time for BSE; 28.8% subjects were aware of steps for BSE and only 27.2% knew the time for BSE during adolescent age and 23.3% subjects answered correctly regarding the best time of BSE for menopausal women.

Less than half 36.4% subjects knew about the management of breast cancer. More than half i.e.51.4 % subjects answered correctly about main complication of breast cancer. About 42.4% subjects had knowledge about the most common site for metastasis. Only 19.2% subjects were aware of breast cancer awareness symbol and 20.8% subjects knew about food habits that can bay the breast cancer. Less than half i.e.32.4% subjects answered correctly about the new method for better prevention and early treatment of breast cancer with high sensitivity.

IV. Discussion

In the present study, only 16.4% had good knowledge and majority 67.6 % had an average knowledge, and rest 16% had below average knowledge regarding breast cancer and breast self examination. These findings are supported by Alam AA in Riyadh on 864 women reported the similar findings that the women had moderate knowledge regarding breast cancer and practice of BSE. Donald reported poor knowledge regarding breast cancer among African-American women residing in public houses. Furthermore, Okobia MN also reported that women had poor knowledge of breast cancer and their mean knowledge score was 42.3%. Only 21.4% knew that breast cancer commonly presents as a painless breast lump.

V. Conclusion

The present study revealed that average knowledge regarding breast cancer and breast self examination is existed. The knowledge of about breast cancer and breast self examination is very vital to make them aware of breast cancer and importance of breast self examination. Based on results of this study the investigator distributed the information booklet to enhance awareness of women about breast cancer and breast self examination. Similar studies can be conducted on

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large samples with multiple settings. The present study was delimited to single setting.

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